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Environmental Samples Hazard Class 7 Radioactive Scenario Package

Prepared for the Department of Energy Office of Transportation and Emergency Management

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Transportation Emergency Preparedness Program (TEPP)

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Checklist for planning and conducting Environmental Samples (Class 7- Radioactive) Emergency Response Drill

(For additional information refer to the "Guidance for Planning, Conducting and Evaluating Transportation Emergency Preparedness Tabletops, Drills and Exercises")



PHASE 1 - PLANNING

1. _____ Determine the scope, objectives and extent of play for the drill (drill may be modified to meet local needs and objectives)
2. _____ Determine drill participants
3. _____ Establish schedule and plan for the drill (Section 4.0 in Scenario Package should be modified based on drill dates/times)
4. _____ Notify proposed participating agencies and confirm support
5. _____ Determine locations for drill activities (command center, accident scene, dispatchers office, etc.)
6. _____ Develop a safety plan (use attached Safety/Plan Checklist)
7. _____ Determine if pre-notification to the media is necessary (if a sample media plan is needed refer to the "Guidance for Planning, Conducting and Evaluating Transportation Emergency Preparedness Tabletops, Drills and Exercises"). If so, appoint a public information officer to handle notifications/inquiries
8. _____ Establish controller assignments and simulated roles (last page of section 6.0)
9. _____ Pull applicable Objective Evaluation Checklists from the Objectives Module (These are to be included in the Drill Scenario Packages for the controller)
10. _____ Modify the shipping document included in the Drill Package (section 12) to include drill specific information (such as the emergency response phone number). Boxes on the shipping document where information should be provided are marked with an "x".
11. _____ Reproduce sufficient copies of Completed/Reviewed Scenario Packages, as well as copies of the Applicable Objective Evaluation Checklists from Manual Section IV
12. _____ Determine and acquire props needed for site simulation
13. _____ Conduct player and observer briefings

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PHASE 2 - DRILL SETUP

1. _____ Ensure all controllers know the schedule and their designated position
2. _____ Ensure all props have been evaluated and validated prior to set up
3. _____ Set up the props at each drill location
4. _____ Ensure safety precautions are in place
5. _____ Verify all controllers are in position and key players/agencies are available to begin the drill

PHASE 3 - DRILL PLAY

1. _____ Ensure safety is and remains the most important concern of the drill
2. _____ Ensure controllers are in place
3. _____ Ensure messages are distributed according to schedule
4. _____ Utilize hold messages if a break in play is needed
5. _____ Ensure all players and controllers at all drill locations receive the drill termination message

PHASE 4 - POST DRILL ACTIVITIES

1. _____ Dismantle drill scene props and return site to original state
2. _____ Direct all players and controllers to the debriefing location(s)
3. _____ Conduct drill debriefing based on controller and player evaluations
4. _____ Document and track drill/exercise strengths and recommended improvement areas



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SAFETY PLAN/CHECKLIST

This is an example of a Safety Plan and Checklist for a transportation emergency drill or exercise. The example is generic and is incomplete in that necessary event-specific information is not included.

Scope

This plan has been included as a scenario package checklist so that controllers will be able to anticipate and recognize unplanned events that could result in personal injury or unforeseen property damage. It enables event participants to be governed by the safety guidelines established for the event.

Pre-drill Safety Requirements

Controllers must be staged before the event is scheduled to begin to ensure there are no pre-existing safety concerns that could affect the start of the event. Controller assignments and locations are identified in Section 6.0 of the scenario manual. The Drill Lead Controller must obtain a safety check from all lead controllers prior to event commencement.

Drill Activity Boundaries and Off-Limit Areas

Drill boundaries, which define the areas at the incident scene that will be in and out of play, will be discussed in briefings, if applicable. Boundaries may also be defined by the “extent of play” for each objective, as shown in Scenario Package Section 3, or depicted on maps in the package. Safety concerns that arise during the drill will be dealt with immediately by the drill controllers in the affected area. As objectives are accomplished, certain areas may be allowed to return to normal activities.

Safety Equipment

Drill participants are required to follow all existing safety guidelines for the use of protective equipment. From the checklist below, mark an X next to the items that are applicable to this drill or exercise, and ensure that these items are provided for participants, as applicable.

- ☐ controller communications
- ☐ drill/exercise identification (i.e., armbands, vests, caps, etc.)
- ☐ illumination devices
- ☐ first aid kit
- ☐ water coolers (field teams may be directed to carry their own water)
- ☐ water carriers (rovers may be directed to deliver water to personnel)
- ☐ personnel comfort items (specify)
- ☐ fire extinguishers
- ☐ safety harnesses/lifelines, etc. (specify)
- ☐ eye/hearing protection devices (specify)
- ☐ gloves (specify who and when they should be worn)
- ☐ hard hats (specify who and when they should be worn)
- ☐ other protective clothing (specify)
- ☐ miscellaneous hand tools (specify)



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Site Specific Hazards

Drill or exercise participants are required to follow all hazard postings in event areas. Participants must obey all traffic laws during the event. Response participants will NOT use emergency lights and sirens when responding to simulated accident scenes. Field teams will travel on designated roads and trails. Field team vehicles will be equipped with fire extinguishers and shovels. No vehicles should go off road where wildlife such as snakes and insects may be encountered.

In the event of electrical storms, high winds or other severe weather, participants will follow controller instructions. Field activities should be suspended or terminated under these conditions.

Controllers and responders must be mindful of symptoms of heat stress. Controllers will ensure that emergency response personnel are allowed the opportunity to rest whenever necessary. Controllers must halt drill play anytime a responder appears to be in distress and take all appropriate actions to ensure the well-being of individuals.

From the checklist below, mark an X next to the actual hazards that may be applicable to this drill or exercise. Special safety provisions should be made for all items checked.

- ☐ traffic (field teams need to be aware of road condition hazards and traffic, especially when performing radiological monitoring)
- ☐ terrain (field teams may be required to use unpaved roads. Each vehicle will be equipped with a fire extinguisher, shovel, bucket, and communications capabilities.)
- ☐ overhead obstructions and hazards
- ☐ electrical storms
- ☐ heat stress
- ☐ cold stress (hypothermia)
- ☐ high winds
- ☐ visibility conditions
- ☐ electrical equipment hazards
- ☐ mechanical equipment/machinery
- ☐ hazardous material/storage areas
- ☐ fuel loading concerns
- ☐ thermal hazards
- ☐ tripping hazards
- ☐ confined spaces
- ☐ elevated locations
- ☐ hazardous materials
- ☐ pest control (i.e., fire ants, wasps, snakes, ticks, mosquitoes, etc.)
- ☐ personnel safety provisions (individual responsibilities/limits)
- ☐ outside agency safety provisions (responsibilities/limits)
- ☐ vehicle safety provisions (i.e., traffic laws shall be obeyed, seat belts used, etc.)
- ☐ drill/exercise control provisions (i.e., safety briefings, how to handle actual emergencies, etc.)



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General Safety Provisions

This section details specialized personnel assignments and functions related to safety concerns. The Controller Organization, found in Section 6.0 of the scenario manual, identifies personnel assignments. No changes will be made to controller assignments without prior assurance that any replacements have equal or greater understanding of safety concerns that could be encountered at the location to which they are assigned.

All safety concerns must be brought to the attention of the Drill/Exercise Lead Controller and the Drill/Exercise Safety Lead through the Controller organization.

Specific incidents and materials that may have adverse effects on people have been addressed in specific sections of the scenario manual. Every effort has been made to anticipate and minimize hazardous situations inherent in this drill/exercise. From the checklist below, mark an X next to the safety provisions that are applicable to this drill or exercise, and ensure that these provisions are communicated to participants and/or enforced.

- _____ individual participants are personally responsible for their individual safety
- _____ each participant must monitor his/her own physical condition for signs of overexertion or distress
- _____ any participant who observes another person injured or otherwise in need of assistance will immediately cease drill/exercise activities and render aid/call for assistance
- _____ all injuries, no matter how slight, must be immediately reported to the nearest Controller.
- _____ all ascents or descents from elevated heights will be by ladder, stairway or other safe method. Jumping from elevated positions is not allowed
- _____ Controllers must be familiar with the hazards of the equipment involved and the required safety measures
- _____ actual emergencies will be dealt with by a shadow force. If an emergency occurs that requires drill/exercise responders to assist, the Lead Controller will suspend or terminate part or all of drill play as deemed necessary.

Security/Public Safety Provisions

From the checklist below, mark an X next to the security and public safety provisions that are applicable to this drill or exercise. Special safety provisions should be made for all items checked.

- _____ a backup or "shadow" force (fire, EMS and police) is in place to ensure community coverage is not impacted by event response
- _____ event calls should/may go to non-emergency lines to ensure that actual "911" calls are handled expeditiously
- _____ security personnel must keep firearms holstered at all times during the drill/exercise
- _____ drill/exercise play will be suspended in the event of an actual emergency

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- _____ emergency vehicles will respond without lights and sirens
- _____ cordoning off of large public areas will be simulated unless cordoning is required for safety reasons
- _____ rerouting traffic will be simulated unless cordoning is required for safety reasons

Vehicle Safety Provisions

From the checklist below, mark an X next to the vehicle safety provisions that are applicable to this drill or exercise. Ensure that these provisions are communicated to participants and/or enforced.

- _____ no vehicle will be driven in such a manner that posted speed limits are exceeded or safe driving rules are violated
- _____ only those vehicles involved in the drill/exercise will be used for movement.
- _____ vehicles may not be mounted or dismounted until they come to a complete stop
- _____ spotters will be used when backing vehicles out of areas where other people or vehicles are present
- _____ roadblocks will be simulated by placing a blocking vehicle on the shoulder of the road and notifying an observer that a roadblock has been established
- _____ all Controller vehicles should be identified/placarded to eliminate player confusion or concerns.
- _____ seat belts must be worn in moving vehicles if the vehicle is equipped with them

This completed Scenario Package Planning Checklist should be kept as part of the hard-copy documentation file for drill planning for this event.

Name of Drill Planner _____

Signature of Drill Planner _____

Drill Date _____

Who Completed Checklist _____



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1.0 INTRODUCTION

This manual provides the basis for an emergency response drill of a simulated transportation accident involving the highway shipment environmental samples (Hazard Class 7 Radioactive, Limited Quantity).

Responding agencies may include several or more of the following: local municipal and county fire, police, sheriff and Emergency Medical Services (EMS) personnel; state, local, and federal emergency response teams; emergency response contractors; and other emergency response resources that could potentially be provided by the carrier and the originating facility (shipper).

The goals of this drill are to:

- demonstrate the emergency response notification and communication system
- observe actual response times of emergency responders to a simulated accident scene
- verify equipment operability (including radiological monitoring equipment) and the accuracy of field emergency response procedures
- ensure all appropriate notifications are made in accordance with local, state, and federal regulations
- identify and assess hazards
- determine and implement protective measures required for both responder personnel safety and public safety
- determine additional response resources required to contain and restore the site and make appropriate notifications to obtain those resources
- This manual provides the guidance for conducting the drill in a safe, efficient, coordinated manner and provides a historical record of the drill.

NOTICE

The drill presented consists of postulated data for a simulated highway transportation accident involving radioactive samples.

This drill was developed to test the ability of emergency response personnel to deal with a hypothetical incident. Its purpose is to provide emergency responders with sufficient data to allow them to respond according to existing emergency plans and procedures.

The incident portrayed in this drill is hypothetical and should not be considered as actual or probable.



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2.0 SCOPE

This drill scenario should be used to demonstrate emergency response resource deployment for the local community to respond to a highway accident involving Environmental Samples. It may also be used to demonstrate the initial phase of the emergency response notification and communication system to:

- observe response times of emergency responders to a simulated accident scene
- demonstrate response activities, including
- responder deployment
- responding agency interaction
- Incident Command System (ICS) establishment and operations
- identification and assessment of hazards
- incident control

3.0 OBJECTIVES

The objectives listed below are based on a simulated transportation (highway) accident and should be performed in accordance with the appropriate state, county and local community procedures and according to the standards and limits outlined in each respective extent of play. The numbering system employed for the objectives is based on the objective numbers from the Federal Emergency Management Agency (FEMA) Hazardous Materials Exercise Evaluation Methodology (HM-EEM); the objectives are not in sequential order. A complete listing of the 16 FEMA HM-EEM objectives (and evaluation criteria checklists) is contained in the Objectives Module Manual.

Objective 1. Initial Notification of Response Agencies and Response Personnel.

Demonstrate the ability to notify response agencies and to mobilize emergency personnel.

Extent of Play:

This objective should be demonstrated by each participating response agency as it would in an actual emergency. All appropriate primary or back-up communications systems (radio, cell phone, land line, etc.) should be used during the drill as in an actual emergency.

The drill will be initiated by contacting the local emergency notification network and reporting to the simulated accident location. All appropriate federal/state/county/local response agencies and units agreeing to participate should be appropriately notified and should respond. All response units should be timed from receipt of emergency notification to arrival on scene.

Personnel/units should be deployed, real-time, to the accident scene based on accident conditions relayed via the notifications system. Responding units shall not transit in an “emergency mode” (i.e., no lights and sirens) and should not take/perform any action that impacts the general public, such as establishing road blocks or detours at or near the simulated incident scene.



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Objective 2. Direction and Control

Demonstrate the ability to direct, coordinate, and control emergency response activities through operation of an Incident Command System (ICS) and other direction and control structures.

Extent of Play:

This objective should be demonstrated by the arrival and assumption of the Incident Commander (IC) position by the first responding unit/personnel as it would be in an actual emergency. A visible command post, communication system, and organizational structure should be established. (Assumption: Response personnel have been trained to conduct response using ICS).

Objective 3. Incident Assessment

Demonstrate the ability to identify the hazardous materials involved in an incident/accident and to assess the hazards associated with the material involved during both the emergency and post-emergency phases.

Extent of Play

This objective should be demonstrated by the active assessment of the incident hazards, including a preliminary observational survey of possible injuries, physical hazards at the accident site, materials released, extent of release, release receptors, and the hazards associated with the materials. The initial assessment information should be obtained from placards, shipping documents, labeling, and the North American Emergency Response Guidebook. Based on the preliminary observational assessment, a determination of further resources to physically assess the incident site should then be made. If resources are available, further physical assessment should occur. If local resources are not available for further assessment, requests for assistance should be made as appropriate (State Response Team or other higher level technical responders).

Objective 4. Resource Management

Demonstrate the ability to mobilize and manage resources required for emergency.

Extent of Play

This objective should be demonstrated by determining the resources required for response as result of the incident assessment. Once the resources required are determined, proper notification and mobilization should occur. Additional resources should be integrated into the response effort by the Incident Commander.

Objective 5. Communications

Demonstrate the ability to establish and maintain communications essential to support response to an incident/accident.



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Extent of Play

This objective should be demonstrated by establishing and maintaining communication between all resources activated for the response. All appropriate primary or back-up communications systems (radio, cell phone, land line, etc.) should be used during the drill as in an actual emergency. A communications system between response personnel should be established onsite by the Incident Commander, as should offsite communications to local, state, federal, shipper, transportation and contract resources.

Objective 10. Response Personnel Safety

Demonstrate the ability to protect emergency responder health and safety.

Extent of Play

This objective should be demonstrated by the establishment, by the site safety officer, of one or more zones to regulate the movement of personnel throughout the accident scene/site, determination and usage of appropriate personal protective equipment (PPE), and usage of appropriate monitoring equipment for site hazards.

Objective 11. Traffic and Access Control

Demonstrate the organizational ability and resources to implement site security and to control evacuation traffic flow and access to evacuated and sheltered areas.

Extent of Play

This objective should be demonstrated by the effective implementation of site security measures by appropriate resources and effective traffic control to divert unnecessary traffic away from the area of the incident/accident. Although security units should be sent to the proper locations for traffic control, no actual roadblocks/detours, etc., shall be established that would affect the general public, unless it is necessary for participant safety. The player should explain/simulate actions that will occur if this were an actual accident.

Objective 14. Emergency Medical Services

Demonstrate the adequacy of personnel, procedures, equipment, and vehicles for transporting contaminated and/or injured individuals, and the adequacy of medical personnel and facilities to support the operation.

Extent of Play

This objective should be demonstrated by the effective determination of EMS resources required for the accident site, communication of potential contamination hazards that may require pre-notification to EMS and other medical support personnel, and steps taken by EMS personnel to plan and prepare for potential contamination hazards.

Because the driver of the van will be dead when EMS arrives on the scene, no actual medical treatment is expected. However, if efforts are made to resuscitate the victim, actual medical transport to a hospital will be simulated.



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Objective 15. Containment and Cleanup

Demonstrate the ability to implement appropriate measures for containment, recovery, and cleanup of a release of a hazardous material.

Extent of Play

This objective should be demonstrated by notifying and obtaining resources for assistance. Personnel (response and additional resources) should assess the impact of the release, demonstrate appropriate planning strategies for control and containment, and then control and contain the material released, if adequate resources are available.

Objective 16. Incident Documentation and Investigation

Demonstrate the ability to document a hazardous materials incident/accident and response.

Extent of Play

This objective should be demonstrated by implementing appropriate log keeping, follow-up documentation, and debriefing procedures.

4.0 Example Schedule

Table 1.0 provides an example schedule for planning and executing the drill. This schedule may be modified for site-specific drill conditions.

Table 1.0. Example Schedule

ACTIVITY	LOCATION	DATE	DURATION (Approximate)
Controller Briefing	TBD	Day 1	1.5 Hours
Controller Field/Scene Walk-downs	TBD	Day 2	2.0 Hours
Drill Player Briefing	TBD	Day 3	1.0 Hour
Drill Conduct	TBD	Day 3	2.0 Hours
Controller Debriefing	TBD	Day 3	1.0 Hour
Player Debriefing	TBD	Day 3	1.0 Hour



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5.0 PARTICIPATION

The following is a list of suggested personnel/groups that may participate in the drill, depending on the desired complexity of the drill (many of these agencies may be simulated for the purpose of the drill).

Local Response Organizations

- Local Fire Department
- Local Municipal Police Department
- County Sheriff's Office
- Emergency Medical Service/Ambulance/Hospital
- Local HAZMAT Response Team (if available)
- Local Emergency Operations Center (EOC)
- Other Mutual Aid Organizations (e.g., nearby Air Force base or power plant response team)

State/Federal Agencies

- US Environmental Protection Agency
- State Environmental Regulatory Agency Emergency Response Team
- National Response Team
- DOE Facility Simulated as Initiating Shipment
- National Response Center (US Coast Guard)
- Regional On-Scene Coordinator
- Regional RAP Team
- State EOC
- State Radiation Response Team
- Nuclear Regulatory Commission

Commercial Organizations

- Commercial Licensed Radioactive Materials Transporter
- Commercial Contractor Trained for Radioactive Material Cleanup



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6.0 CONDUCT

The following section provides guidelines for drill conduct.

Concept of Operations

Three groups of personnel will participate in the exercise; Players, Controllers, and Observers.

Players

Players are individuals who have assigned roles during an emergency. Players should respond to the scenario as they would during an actual emergency, initiating actions to control and mitigate the simulated emergency to ensure the health and safety of response personnel and the public.

Players are expected to obtain necessary information through established emergency information channels and to use their own judgment in determining response actions when resolving problems.

Controllers

Controllers are responsible for the safe and effective conduct of the drill. They perform an active role in the drill by providing data to Players. Controllers are the only non-Players who provide information or direction to Players. Controllers may prompt or initiate certain Player actions to ensure drill continuity. Controllers are responsible for evaluating or critiquing the exercise. Controllers are identified by wearing a standard identification device.

Observers

Observers are persons who do not have an active drill role but who watch drill conduct. Observers do not communicate directly with players. They should, however, report any safety concerns to a controller. Observers are identified by wearing standard identification devices different from those worn by controllers.

Controlling Messages

Drill Messages

Drill messages are used to control the flow and progress of the drill. These messages are designed to simulate the physical indications that would normally be available to responders in an actual emergency. Drill messages are issued by Controllers to Players at appropriate times. The issuance of drill messages is coordinated via the scenario timeline; Controllers are briefed prior to the drill in a controller briefing. Concurrence from the Lead Controller during the drill is not normally required.

Contingency Messages

Contingency messages are used to ensure the continuity of the drill in the event that Players do not initiate actions that are critical to the drill timeline. Issuance of contingency messages requires the notification of the Lead Controller PRIOR to issuance, in most instances.



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Drill Controller Debrief/Drill Report

Immediately upon termination of the drill, Drill Controllers should meet to review player actions and identify drill issues. A drill report documenting drill observations should be prepared upon completion of the drill and should be submitted to the appropriate organizations.

Drill Ground Rules

At no time shall Players, Controllers or Observers physically walk across the highway or railroad tracks without the escort of Safety Controllers or Public Safety Officers.

Players shall not have prior knowledge of the scenario.

The drill scenario should not include any actions or situations that degrade the actual condition of systems and equipment, affect the detection and assessment of actual emergencies, or diminish the capability for response to actual emergencies.

No actions or reactions shall be initiated that involve actual operation of equipment (other than radiation monitoring) or affect operating capability.

Emergency response facilities should not be pre-activated and response personnel should not be prestaged.

All players should follow their normal work routines until drill events cause them to initiate emergency response actions.

Except for the actions identified in the list of actions to be simulated, or as otherwise directed by drill Controllers, Players are to respond to drill events and information as if the emergency were real.

Players shall act as if simulated hazardous conditions were real.

All drill participants shall take no action that reduces the safety of themselves or the public.

All drill participants shall adhere to public laws, including traffic regulations, and shall follow any orders given by law enforcement personnel.

Controllers should only provide Players with the information that they are specifically designated to disseminate in their assigned functional area. Players are expected to obtain other necessary information through existing emergency information channels.

In the event that Players do not initiate actions “critical” to the successful completion of the drill scenario, Controllers should issue Contingency Messages, which direct Players to initiate specific actions and/or provide on-the-spot training to assist completion of critical actions.

All drill messages and communications shall be preceded and followed by the phrase, “THIS IS A DRILL.”

Drill Controller Guidelines

The responsibility of Drill Controllers is to ensure that drill events occur in the sequence prescribed by the scenario and to monitor drill play. Drill Controllers must be familiar with the emergency plan and procedures that pertain to their assigned area.



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Before Drill Day

- Familiarize yourself with the drill objectives and extent of play applicable to your area of control.
- Ensure that you understand the scenario and timeline.
- Obtain and review emergency procedures applicable to your area of control.
- Familiarize yourself with the Controller organization and communication methods.
- Review drill messages and scenario information that you are responsible to provide to Players. Ensure that you understand how the Players are to receive this information and what their responses should be.
- Ensure you know how to contact the Lead Controller for questions or problem resolution.
- Perform a field walk-down of your observation location(s) to ensure you know where and when you must report prior to drill commencement.

Immediately Prior to the Drill

- Report to your assigned area as scheduled.
- Familiarize yourself with your assigned work station and equipment.
- Ensure that you are readily identifiable by all Players.
- Identify and test a phone or radio that you may use for communications with other Controllers.
- Identify yourself to any Players who may be in your area of control. Ensure they are familiar with your role.

During the Drill

- Ensure that safety remains the number one priority for all actions and activities carried out during the drill.
- Identify all Players that you will be controlling during the drill, and inform them of your function.
- If applicable, brief all Players in your area on drill ground rules and/or initial conditions. Explain that you may help/instruct the Player(s) in proper response actions based on their actions during the drill.
- Remain at your assigned location until the drill has been terminated by the Lead Controller.
- Ensure that each Player in your area of control/observation has been logged on an attendance sheet and that the attendance sheet identifies the appropriate facility.
- If a real emergency occurs that affects the Players in your area of control/observation, terminate your portion of the drill and notify the Lead Controller.
- Refer any/all actual general public and/or media inquiries to the "Official Drill Information Contact Point," TBD, as applicable, based on your location.

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- Position yourself to maximize your effectiveness in issuing messages and/or observing the players.
- Record arrival times and actions of key players.
- Distribute drill messages, as required, and provide additional input, as necessary, to keep the scenario progressing as designed. Make sure that the Players understand the messages you give them.
- If you are uncertain what actions are being taken by the players or why, make sure you ask, so that you understand the extent of play. Phrase questions so as not to prompt the players of expected actions. Allow the Players reasonable flexibility to perform their functions and demonstrate their skill, knowledge, and initiative.
- Do not allow external influences to distract the Players.
- Do not allow simulation when notification/communication equipment is available (unless the action would decrease the level of personnel safety).
- Note all your observations, as appropriate, on the provided Drill Chronology Logs and Observation Checklists.
- Do not allow Player actions to continue if they would obviously impair scenario continuity. Notify the Lead Controller if the timeline is off schedule, if the Players depart significantly from the scenario, or if you are in doubt as to what to do.

Upon Drill Termination

- Complete Drill Chronology Logs.
- Document drill findings on the appropriate Drill Controller Checklists and Chronology Logs, as appropriate.
- Participate in the post-drill Drill Controller debriefing.



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Drill Controller Organization

Name	Position
TBD	Lead Controller
TBD	Lead Incident Scene Controller
TBD	Media/Public Interface PIO Representative
TBD	Incident Scene-Safety
TBD	Motorist Role-player
TBD	DOE Facility Operations Center
TBD	Incident Scene-State Law Enforcement
TBD	State Emergency Preparedness
TBD	County Sheriff Office Dispatcher
TBD	Fire Department Dispatcher 1
TBD	Fire Department Dispatcher 2
TBD	County EMS Dispatcher
TBD	Incident Scene Commander
TBD	Incident Scene-Responding Unit(s)
TBD	Incident Scene-Responding Unit(s)
TBD	Incident Scene-Responding Unit(s)



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7.0 NARRATIVE SUMMARY/TIMELINE

The following section provides a narrative summary of the drill scenario and an approximate timeline (Table 2.0, located at the end of this section) for drill activities. The timeline also provides anticipated points during the drill where dissemination of the drill messages contained in Section 8.0 is appropriate. The scenario and timeline are suggested guidelines for the drill and may be modified to meet site-specific conditions.

Meteorological Conditions Summary

Meteorological conditions are “live”.

Initial Conditions (occurring prior to drill commencement)

A sample shipment (Class 7 Radioactive) is being transported by a carrier service in a delivery van. The samples came from DOE facility (Shipper), are traveling through the local area. The destination facility is a permitted Radiation Lab. The van is two-thirds of the way empty.

Drill Play Begins at This Point:

The delivery driver suffers a massive heart attack and loses control of the van, resulting in the van leaving the pavement and rolling into a ditch. Several containers fall from the shelves in the van. The radioactive samples in one container begin leaking, causing a wet spot on the outside of the container.

The delivery driver never regains consciousness and dies at the scene before EMS arrives. A motorist (role player) in a vehicle in the vicinity accident “observes” the simulated accident and reports it, via cellular phone to the local emergency response network (911 for example) dispatch center. The caller also reports that a delivery van is in a ditch, and he/she doesn’t see the driver out of the van.

Emergency response units should be dispatched to the incident scene, based on the information transmitted via the notification/communications system. Initial emergency response units notified for deployment should include, at a minimum (either real or simulated), local police/sheriff’s department, fire department, HAZMAT Team (if applicable) and EMS.

All arriving units should be timed and accounted for. Any unit arriving with radiological monitoring equipment should demonstrate radiological monitoring/survey operations.

The first emergency response unit to arrive should assume the position of Incident Commander (IC). They should establish initial control of the scene, cordon off the accident area, and set up traffic control or rerouting. Shortly after the arrival of the first responder unit, the remaining response units (Fire, Police, EMS, etc.) should arrive.

The Fire Chief should be briefed on the accident scene conditions by the first responder. The Fire Chief should then assume the position of IC from the initial responder. A Command Post should be established along with lines of on-site and off-site communication. The IC should delegate responsibilities to the responders at the scene. A site safety officer should be assigned to determine requirements for monitoring and PPE.

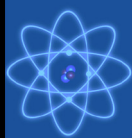


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Upon arrival at the scene, EMS should assess the scene and plan/prepare for potential contamination hazards.

EMS personnel should determine that the driver is dead and contact the coroner. If, however, EMS attempts to resuscitate the driver, transport to a local hospital will be simulated.

Responders should retrieve the driver's clipboard with the shipping papers (air bills) on it. The air bills will list the shipper's telephone number.

An initial hazards assessment should be made of the scene. However, due to the unknown nature of the hazard and potential contamination from the release, personnel should not be allowed within direct proximity of the leaking package. (Appropriate monitoring equipment and PPE must be utilized for the physical site assessment.) The IC should then brief all responders on the observed hazards at the scene prior to any response actions occurring. A strategy for site safety and response actions should be developed in accordance with the guidelines set forth in the Emergency Response Guidebook.

Proper site control and evacuation procedures should be implemented. Per the Emergency Response Guidebook, persons within 330 feet of the incident scene should be evacuated (this may require extending the initial cordon established by the arriving unit).

A resources assessment should be conducted by the IC/Safety Officer. The resource assessment should reveal monitoring equipment and appropriate PPE needed for additional site assessment. If monitoring equipment is available, the responders will don appropriate PPE and proceed with area surveys for possible contamination. If monitoring equipment is not available the IC should contact other responding agencies for assistance, such as the state spill response team or another higher level technical response unit in the area. No further action should be taken at the site until monitoring occurs.

The IC should ask the dispatcher to call the emergency response phone number on the shipping papers (shipper/DOE). The shipper (simulated by a role player) should provide technical data and response information specific to the material involved. This information is provided to the dispatcher and passed on to the IC. The shipper will also tell the dispatcher/IC that a Radiation Response Team should be deployed to the site within 1 hour. The shipper will then notify the Radiation Response Team for deployment. The IC should also ensure the transporter company is notified of the accident (may be simulated). (Note: The transporter is responsible for notifying the Department of Transportation of the incident at the earliest practicable moment. This notification may be simulated.)

Other Federal and State response and reporting organizations are notified by the Shipper (DOE originating facility). (This notification may be simulated.)

The Radiation Response Team should arrive and report to the IC. The IC should provide a status briefing and make appropriate requests for radiological monitoring to demonstrate an understanding of Radiation Response Team capabilities.

The on-scene portion of the drill should be terminated subsequent to the integration of the Radiation Response Team into the ICS. A drill debriefing should be conducted subsequent to termination of the drill to provide evaluation results and lessons learned.

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**Table 2.0. Timeline**

Clock Time	Suggested Drill Time	Event/Expected Action	Message No.
	-01:00	All controllers are in place. Communications and time check completed between Lead and Controller Staff.	
	-00:15	Incident scene is set up (Drill Controllers, players, prop signs, etc.)	
	00:00	Van turns over on side of public highway.	
	00:00	Motorist calls (actual) emergency response network (911) and reports accident/scene conditions.	1
	00:05	Dispatch of emergency units is prompted.	2
	00:15	Emergency response units begin arriving and begin evaluating the Incident Scene.	3
	00:15	EMS personnel arrive and determine that the driver is dead. The coroner is notified.	MM1
	00:20	EMS personnel are prompted to use contamination precautions if/when searching for additional victims.	MM2
	00:20	Site security and control established	
	00:20	ICP established	
	00:25	If EMS attempts to resuscitate the victim, transport to a local hospital will be simulated	MM3
	00:30	Site Assessment for injuries and hazards begins along with the Resource Evaluation. Incident response strategy to be developed.	4
	00:45	Radiation survey performed (if equipment available)	
	00:50	Local/State Dispatcher(s) prompted to contact shipper to obtain emergency/technical information.	5
	01:15	Deployment message to Radiation Response Team	6
	01:00	Radiation Response Team (contractor) arrives and debriefing occurs	7
	TBD	Hold Message 1 and 2 to be used only for breaks in Play and to resume Play.	8A/B
	01:30	Drill Termination announcements to all agencies.	9
	01:30	Drill Controllers and players return incident scene to pre-drill conditions.	
	02:00	Drill Controller/Player debrief and incident documentation at the local command center.	



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8.0 MESSAGES

MESSAGE 1

Role Player (Motorist) Initial Notification Call

TO: Emergency Response Network Dispatcher

FROM: Motorist (Player)

TIME: (00:00)

NOTE: Call in this message via cell phone upon Lead Controller authorization to commence the drill. This message provides a "bystander" eye witness notification of the van accident.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

This is _____. I am on highway _____, near mile marker ____ and there has been a wreck.

A van has wrecked and is in a ditch.

There doesn't appear to be any smoke or fire coming from the van

I don't see anyone around the van.

You had better get help out here fast.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 2 (Contingency Message)

Initial Dispatch of Units

TO: Emergency Response Network Dispatcher
FROM: Dispatch Controller(s)
TIME: (00:05)
NOTE: Issue this message with concurrence of the Lead Controller if no actions have been or are being taken to dispatch emergency units (i.e., police, fire department, HAZMAT or EMS) to the incident scene.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

MESSAGE:

For the purpose of this drill you are directed to dispatch the following emergency response units to the incident scene (list only the applicable units that have not already been dispatched, as shown below):

- Fire Department
- Police Department
- HAZMAT
- EMS

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 3

Responder Arrival to Scene, Initial Condition Assessment

TO: Responders At The Scene

FROM: Incident Scene Controllers

TIME: (00:15)

NOTE: This message serves to provide players with a description of simulated incident conditions. The police/sheriff should be first to arrive. Within 5 minutes the remaining first responding units should arrive and be briefed.

** Information within this message will only be relayed to responders positioned within line of site of the specified conditions IF adequate props are not available. Use the drawing in Section 12 if it does not give away unearned information to players and if it helps describe the props available or the absence of props, as applicable. **

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

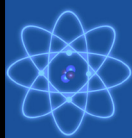
Message:

For the purpose of the drill the following information is to be provided to responders within line of site (if props are unavailable):

- The van is in a ditch.
- (Issue only if/when players enter rear van area.) A container with the following printed on it: "This Package conforms to the conditions and limitations specified in 49CFR 173.421 for radioactive material, excepted package-limited quantity of material, UN 2910" is leaking.
- No smoke or fire is coming from the van.
- You see the driver still in the van.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 4 (Contingency Message)

Hazard Assessment

TO: Incident Commander

FROM: Lead Controller

TIME: (00:30)

NOTE: This message is to be given if play stalls during the hazard assessment phase. This message may be used to prompt the players to proceed with the drill. Issue only those portions of the message that are appropriate (i.e., have not been considered or begun).

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

Issue only the applicable portions of the message below:

- For the purpose of the drill, you are directed to examine the leaking package (may be simulated) in the rear of the wrecked van.
- For the purpose of this drill, you are directed obtain the driver's clipboard from the van with the air bills on it.
- You are directed to observe package marking on the leaking package and use the information for hazard assessment purposes.
- You are also directed to determine if resources available are adequate for thorough site assessment and site control.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 5 (Contingency Message)

Shipper Information

TO: Emergency Network Dispatcher or Incident Commander (as applicable)
FROM: Dispatcher Controller or Lead Controller (as applicable)
TIME: (00:50)
NOTE: This message serves to ensure that technical information from the shipper is received by the Incident Commander. Issue the applicable portion(s) of this message as described in italics below.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

If the IC does not call the shipper directly from the Command Post or ask the dispatcher to contact the shipper within a reasonable amount of time OR if the dispatcher has been asked to contact the shipper but has not done so within a reasonable amount of time:

For the purpose of this drill you are directed to contact the shipper using the their number (as listed on the air bill or as provided by the IC).

If action is taken by the IC or dispatcher to contact the shipper, but the shipper is not playing or being simulated by a role-player:

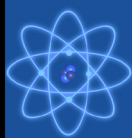
“Relay the following message to the IC. The material is a tritium contaminated water sample. Cordon off the area, evacuate 100 meters downwind, have response personnel remain upwind, and do not try to clean up the site. Remain outside of the area of release. A Radiation Response Team is being deployed and should arrive within one hour.”

If the dispatcher contacts the shipper (actual or role-player) but does not relay the technical information received back to the IC in a reasonable amount of time:

“For the purpose of this drill you are directed to contact the IC and relay the technical information provided to you by the shipper.”

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 6 (Contingency Message)

Radiation Response Team Deployment

TO: Radiation Response Team

FROM: Shipper Controller or Radiation Response Team Controller

TIME: (01:15)

NOTE: Subsequent to notification provided to the Shipper of the accident, the Shipper should notify either contracted or state Radiation Response Team resources for deployment. Issue this message after the Incident Commander receives the technical information from the shipper and is told that the Radiation Response Team will be deployed. This message should be issued only if the Radiation Response Team is not contacted by the shipper within a reasonable amount of time, or if the shipper is being simulated.

If the Radiation Response Team is being simulated, at least one person must be designated as a role-player and sent to the Incident Command Post at this time to interface with the IC for the turnover briefing.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

Deploy to the accident site for radiation containment and cleanup.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 7 (Contingency Message)

Radiation Response Team Briefing With Incident Commander

TO: Incident Commander

FROM: Lead Controller

TIME: (01:30)

NOTE: The purpose of this message is to ensure the Radiation Response Team is integrated into the Incident Command System after their arrival. If an actual or simulated (by role-players) Radiation Response Team is participating, this message will be used to prompt the IC to give a situation briefing to the Radiation Response Team if the IC does not initiate this action within approximately 10 minutes of Radiation Response Team arrival. If the Radiation Response Team is being simulated and no role-players are available, the Lead Controller will simulate the team and request a turnover briefing using the second portion of this message.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

Issue this portion of the message ONLY if the Radiation Response Team (actual or role-players) has been at the Command Post for approximately 10 minutes and the Incident Commander has not shown any initiative to provide the team with a briefing and integrate them into the response activities:

For the purpose of the exercise being conducted today, you are directed to give the members of the Radiation Response Team a briefing and then integrate them into the response activities.

Issue this portion of the message ONLY if the Radiation Response Team is being simulated by the Lead Controller:

For the purpose of the exercise being conducted today, I am role-playing the Radiation Response Team. Please provide me with a briefing at this time.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 8A

Hold Message 1

TO: All players

FROM: Lead Controller

TIME: Upon suspension of drill play

NOTE: DO NOT issue this message without authorization from the Lead Controller. Continuation of the drill play will occur upon coordination and concurrence between the Lead Controller and the field controllers.

Drill play will resume at the direction of the Lead Controller approximately five minutes after message 9B is issued.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL.

THE DRILL HAS BEEN SUSPENDED. ALL PERSONNEL ARE TO REMAIN IN THEIR CURRENT LOCATIONS. EMERGENCY RESPONDERS ARE NOT TO DISCUSS DRILL ACTIVITIES DURING THIS SUSPENSION. STAND BY FOR FURTHER INSTRUCTIONS REGARDING DRILL ACTIVITIES.

Make this announcement every 5 minutes.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 8b

Hold Message 2

TO: All Players

FROM: Lead Controller

TIME: Upon suspension of drill play

NOTE: DO NOT issue this message without authorization from the Lead Controller. Continuation of the drill play will occur upon coordination and concurrence between the Lead Controller and the field controllers.

Drill play will resume at the direction of the Lead Controller approximately 5 minutes after this message is issued. Controllers should use the 5 minutes prior to drill continuation to remind players of what was occurring when play was suspended.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL.

DRILL ACTIVITIES WILL CONTINUE IN 5 MINUTES. THE DRILL CONTROLLERS WILL PROVIDE INFORMATION TO PLAYERS PRIOR TO CONTINUING THE DRILL.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Message 9

Termination Message

TO: All Key Players/Notification Locations
FROM: Lead Controller
TIME: (01:45)
NOTE: Ensure all participating agencies are notified of drill termination via the notification system.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

The Environmental Samples Drill is now terminated. Please make all necessary termination notifications. A drill debriefing will be conducted at _____ (location) at _____ (time).

(Repeat Message)

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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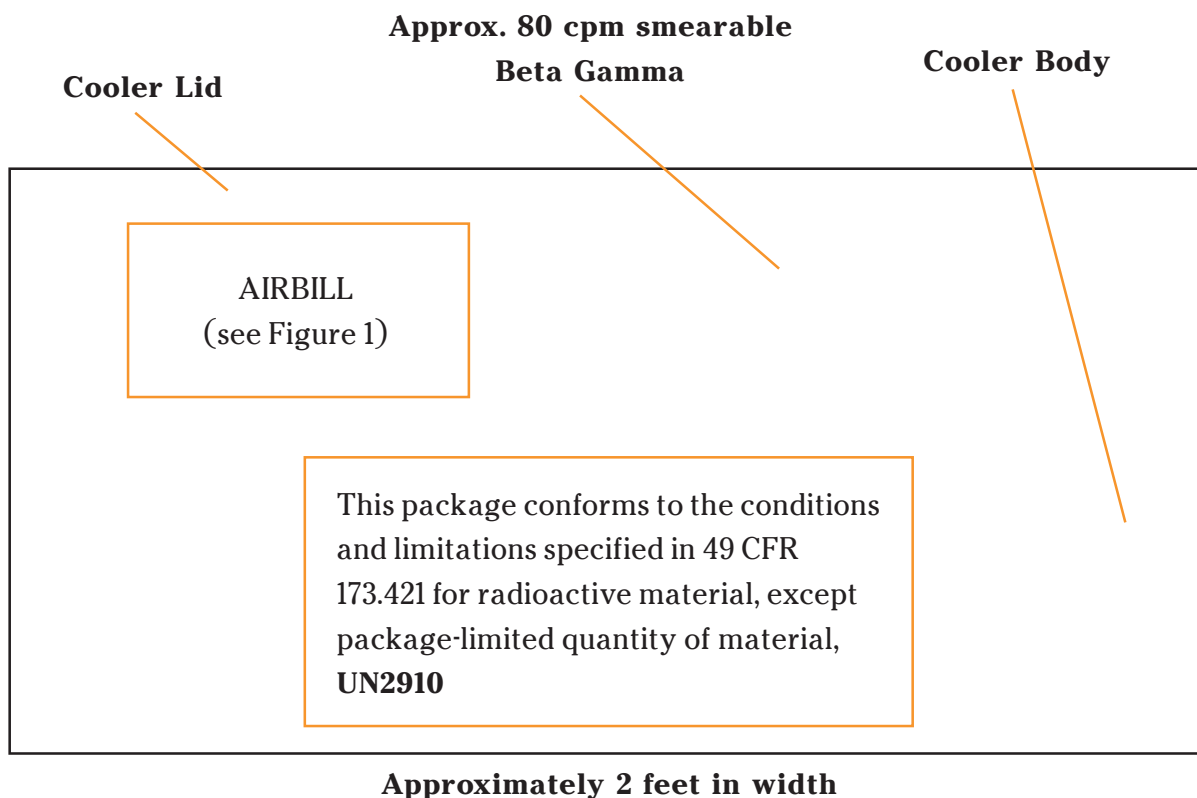
9.0 RADIOLOGICAL DATA

One of the simulated environmental samples (water) is leaking and is simulated to have spread small amounts of contamination on the outside of the cooler. (See Figure 1.0 below). Inside the cooler, one of the seven samples (simulated by a 1000 ml amber bottle of water) is damaged and has leaked out most of its contents.

If/when radiological monitoring surveys are performed (by the first responding unit(s) or the Radiation Response Team) smears of the container detect between 50 and 80 cpm bg and no detectable levels of a contamination). Radiation readings in all other areas will be at "background" or Non-Detectable (ND) levels. Although unexpected, if players open the cooler, they will detect approximately 200 cpm over the surface of the spilled liquid.

Controllers should only give the above radiation data to players if and when they use their survey equipment properly. For instance, if players do not turn their equipment on, controllers should indicate to them that their instruments are reading the lowest possible numbers on their scale.

Figure 1.0 Contaminated Cooler



Environmental Samples Hazard Class 7 Radioactive Scenario Package

A graphic showing a white semi-truck with a hazardous materials placard on its side, set against a background of orange and red flames. The text "planning tools" is written in a stylized font above the truck.

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10.0 METEOROLOGICAL DATA

All weather conditions for this drill are “live”.

Drill play will be suspended for certain adverse weather conditions as described in the Safety Plan.

11.0 PUBLIC INFORMATION DATA

There are no Public Information (drill play) activities for this drill.

Refer any/all “actual” general public and/or media inquiries to the “Official Drill Information Contact Point,” TBD, as applicable, based on your location.

12.0 DRAWINGS/PROPS

Drawings

A mock-up of the air bill is included in this section as Figure 2.0. This should be modified to reflect the sender and recipient for your specific area. An incident scene drawing is also included as Figure 3.0. This drawing may be modified to suit local situations.

Props (suggested)

- Van
- Cooler with seven amber 1000 ml containers of water in it (some of the water should be spilled in the cooler and a wet spot should be on the outside to show that the container is leaking).
- Air bill on clipboard
- Extra boxes to simulate additional shipments on van
- Mannequin may be placed in cab of van to simulate the deceased driver.

Note: Signs, flags and/or traffic cones may be used as “props” in lieu of an actual van based on budget and logistics considerations.



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Figure 2.0 Airbill

Acme Express Airbill	
Date	Type of Service
Sender's Name	<input checked="" type="checkbox"/> Overnight ____ Second Day
Phone #	
Company	Packaging
Address	____ Letter ____ Box <input checked="" type="checkbox"/> Other
Internal ID#	Special Handling (Does This shipment contain Dangerous Goods)
	____ Yes (As per attached shipper's Declaration)
Recipient's Name	<input checked="" type="checkbox"/> Yes (Shipper's Declaration not required)
Phone #	____ Cargo Aircraft Only (CA)
Company	
Address	Carrier's Phone Number

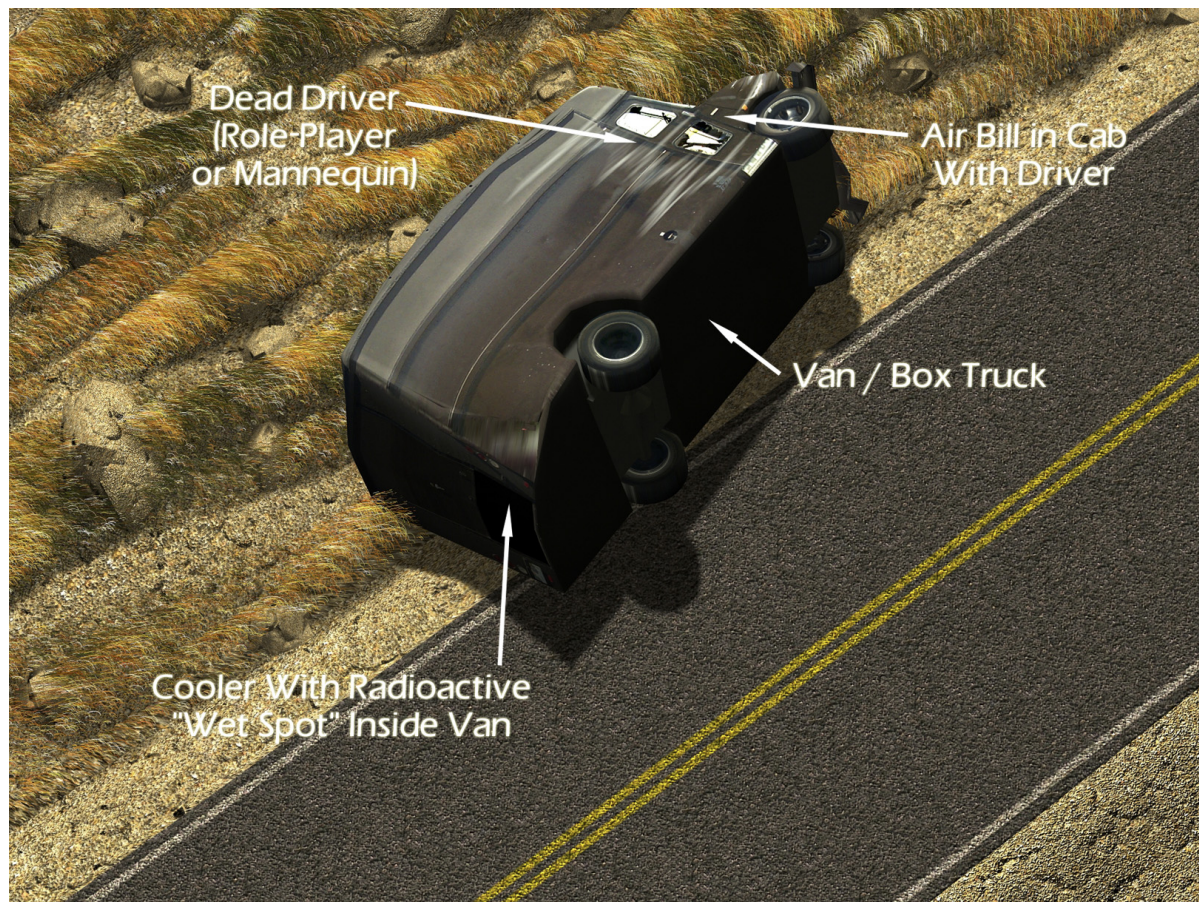
Note: Fill in sender's recipient's and carrier's information as per drill play.



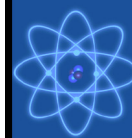
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Figure 3.0 Incident Scene Drawing



NOTE: Road names and landmarks may be hand-written onto this drawing to make it specific to your area.



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13.0 SIMULATIONS

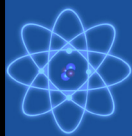
Most drill activities will actually be performed as if the incidents were really occurring. The following list identifies the actions to be simulated when and if these actions are indicated in response to the simulated scenario events. Additionally, Controllers may direct participants to simulate certain activities to avoid performing actions that may cause adverse effects.

- Accident scene(s), damaged equipment, injured personnel and other simulations may be accomplished through the use of a sign(s) indicating the wreck location, etc. Props, mock-ups, and victim role players should be used in this drill.
- No public notification or any other actions affecting the general public should be implemented.
- Roadblocks or detours should be physically established as a result of the accident scene location.
- Some roles and notification phone numbers may be simulated depending upon agencies that are participating. Simulated roles may include the Radiation Response Team, Federal Agencies Notified, the Shipper, and agencies other than local emergency responders. These simulations shall be accomplished through the use of role players and assigned phone numbers to role players.
- The van, containers and released materials will be simulated using appropriate props.
- Transport of the deceased driver to the hospital (if resuscitation is attempted) will be simulated.

14.0 SECURITY

If necessary (depending on the location of your incident scene), some local law enforcement personnel (non-players) may be pre-staged at the scene for scene safety reasons (i.e., reroute traffic away from the simulated scene). However, the impact of the drill on the general public should be kept at a minimum.

Law Enforcement units and personnel who are actually dispatched as part of drill play should report to locations as directed for scene control. However, these units should NOT actually establish barricades or cordons that would affect the general public. Public Safety/ Security controllers will determine the effectiveness of law enforcement activities by noting the arrival times, locations and simulated activities of these units.



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15.0 MEDICAL DATA

The medical injury in this scenario occurs when the driver of the van (role-player) has a fatal heart attack (simulated) as drill play begins.

A motorist who comes upon the scene calls the emergency dispatcher and reports the accident, including no one visible around the accident.

When EMS arrives, the radiation hazard will have been discovered and EMS personnel should take the necessary precautions to prevent the possible spread of contamination. A contingency message is included in the messages that follow that can be used by the EMS/Medical Controller if EMS takes no precautions and it is likely that players would unknowingly spread simulated contamination. Using this message would prevent having to issue “ad hoc” data for contamination, which is not addressed in this scenario package.

EMS should determine that the victim is dead and contact the coroner. However, in the event that EMS attempts to resuscitate the victim, medical play will terminate when the victim is loaded onto the ambulance. Actual transport of the victim (role-player) will be simulated.



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Medical Message: 1

TO: First Responders/EMS

FROM: EMS Controller

NOTE: This data applies to a patient who dies from a fatal heart attack. Do not provide this data to players unless the means to obtain it are demonstrated.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

Patient is dead upon EMS arrival.

Minutes after EMS arrival	+0	+10	+20	+30
Level of Consciousness	No response	No response	No response	No response
Respirations	0	0	0	0
Pulse	0	0	0	0
Skin	Pale/diaphoretic	Pale/diaphoretic	Pale/diaphoretic	Pale/diaphoretic
Pupils	Dilated/ No response	Dilated/ No response	Dilated/ No response	Dilated/ No response
Blood Pressure	0	0	0	0

Expected Action:

Contact coroner.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



**Environmental Samples Hazard Class 7
Radioactive Scenario Package****planning tools****Medical Message: 2**

TO: First Responders/EMS

FROM: EMS Controller

NOTE: This data should be issued by the Lead EMS Controller only if EMS personnel take no precautions against the spread of contamination and their actions at the scene (i.e., their approach to the scene or a search for other possible victims) would likely cause the spread of contamination and require controllers to issue "ad hoc" contamination data if those personnel were surveyed.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

For the purpose of this drill, you are directed to plan for and take all necessary precautions to prevent the spread of radiological contamination as required by procedures.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations



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Medical Message: 3

TO: First Responders/EMS

FROM: EMS Controller

NOTE: This message should be issued **IF** the victim role-player is prepared for transport, and before EMS personnel begin actual transport to a hospital. Expected actions are to leave victim at scene and contact the coroner.



THIS IS A DRILL

DO NOT initiate actions affecting safe operations

Message:

For the purpose of this drill, DO NOT actually transport the victim (role-player or mannequin) to the hospital. However, you are directed to make drill communications to your dispatcher indicating that simulated transport of the victim has occurred and your ETA.

THIS IS A DRILL

DO NOT initiate actions affecting safe operations

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